

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Original) An optical recording medium having a first recording area where an offset signal is recorded, and a second recording area where a signal indicative of the fact that said first recording area is provided and/or the position whereat said first recording area is recorded, said offset signal being produced by shifting a center of an eye pattern corresponding to an optimal slice level of a recorded signal in an analog signal processing section in a reproducing apparatus which reproduces the recorded signal, from a center of an amplitude of said eye pattern.

2. (Original) An optical recording medium having a first recording area where an offset signal in which a duty ration of a signal recording section in a recording track is shifted from a standard value is recorded and a second recording area where a signal indicative of the fact that said first recording area is provided and/or the position whereat said first recording area is recorded.

3. (Original) An optical recording medium as set forth in claim 1, wherein a signal indicative of the fact that said first recording area is close to its end is further recorded in said first recording area.

4. (Original) An optical recording medium as set forth in claim 1, wherein said second recording area is formed in one of a position preceding said first recording area in reproduction and a lead-in section of said medium.

5. (Original) A method of fabricating an optical disk original record for forming and manufacturing an optical disk having a first recording area where an offset signal in which a duty ration of a signal recording section in a recording track is shifted from a standard value is recorded and a second recording area where a signal indicative of the fact that said first recording area is provided and/or the position whereat said first recording area is recorded, comprising the steps of applying a photoresist on a base material for said optical disk original record, making said photoresist exposed to light intensity-modulated in accordance with an information signal to be recorded, and developing said photoresist to form an irregular pit configuration corresponding to its sensitivity on said base material for said optical disk original record, wherein for the formation of said irregular pit configuration a recording equalizing quantity for said information signal is changed so that a duty ration of a length of each of pits to a distance between said pits is changed to form a signal area where a center of an eye pattern is shifted from a center of an amplitude in a specific relationship.

6. (Original) A method of fabricating an optical disk original record for forming and manufacturing an optical disk having a first recording area where an offset signal in which a duty ration of a signal recording section in a recording track is shifted from a standard value is recorded and a second recording area where a signal indicative of the fact that said first recording area is provided and/or the position whereat said first recording area is recorded, comprising the steps of applying a photoresist on a base material for said optical disk original record, making

said photoresist exposed to light intensity-modulated in accordance with an information signal to be recorded, and developing said photoresist to form an irregular pit configuration corresponding to its sensitivity on said base material for said optical disk original record, wherein for the formation of said irregular pit configuration the intensity of said light to which said photoresist is exposed is changed to form a signal area where a center of an eye pattern is shifted from a center of an amplitude in accordance with the change of the light intensity.

7. (Original) A method of fabricating an optical disk original record for forming and manufacturing an optical disk having a first recording area where an offset signal in which a duty ratio of a signal recording section in a recording track is shifted from a standard value is recorded and a second recording area where a signal indicative of the fact that said first recording area is provided and/or the position whereat said first recording area is recorded, comprising the steps of applying a photoresist on a base material for said optical disk original record, making said photoresist exposed to light intensity-modulated in accordance with an information signal to be recorded, and developing said photoresist to form an irregular pit configuration corresponding to its sensitivity on aid base material for said optical disk original record, wherein for the formation of said irregular pit configuration a recording equalizing quantity for said information signal is increased and the intensity of said light to which said photoresist is exposed is lowered, or said recording equalizing quantity for said information signal is decreased and the intensity of said light to which said photoresist is exposed is increased, thereby forming a signal are in which a center of an eye pattern is shifted from a center of an amplitude.

8. (Original) A method of reproducing an optical disk comprising a step of, after a signal having a specific pattern is detected, changing a threshold value to be used in demodulating an RF signal into a digital signal.

9. (Original) A reproducing system for an optical disk comprising means for, after a signal having a specific pattern is detected, changing a threshold value to be used in demodulating an RF signal into a digital signal.

10. (Original) A reproducing system for an optical disk as set forth in claim 9, further comprising means for, when a signal is not reproduced from an area in which a signal having a center of an eye pattern shifted from a center of an amplitude is recorded, stopping a further reproduction.

11. (Original) An optical disk reproducing system which reads out, through an optical head, a data signal including a program modulated and recorded on an optical disk to reproduce an analog signal, and slices through a slice circuit, said analog signal with a slice voltage corrected with an offset voltage being applied to a reference slice voltage in accordance with a duty ratio of said analog signal to reproduce a first digital signal, and demodulates said first digital signal into a second digital signal through a demodulator to reproduce a third digital signal from said second digital signal through an error correction circuit, said reproducing system comprising an offset signal variation detecting section for detecting that said offset voltage varies in a specific state, and means for, when said offset signal variation detecting section does not detect that said offset signal is in said specific state, stopping one of an output of said data and an operation of said program.

12. (Original) An optical disk reproducing system as set forth in claim 11, further comprising means for reproducing offset signal arrangement information recorded in an area of said optical disk, and further for, only when said offset signal variation detecting section detects that an offset signal is recorded in a specific area of said optical disk in a specific state indicated in said offset signal arrangement information, continuing one of an output of data on said optical disk and an operation of said program, and, when not detecting it, stopping one of the output of said data on said optical disk and the operation of said program.

13. (Original) An optical disk reproducing system as set forth in claim 12, wherein said optical head reproduces said offset signal arrangement information recorded in an optical recording section.

14. (Original) An optical disk reproducing system as set forth in claim 12, wherein a magnetic head reproduces said offset signal arrangement information recorded in a magnetic recording section.

15. (Original) An illegal program operation stopping method using a reproducing system which reads out, through an optical head, a data signal including a program modulated and recorded on an optical disk to reproduce an analog signal, and slices through a slice circuit, said analog signal with a slice voltage corrected with an offset voltage being applied to a reference slice voltage in accordance with a duty ratio of said analog signal to reproduce a first digital signal, and demodulates said first digital signal into a second digital signal through a demodulator to produce a third digital signal from said second digital signal through an error correction circuit, wherein an offset signal variation detecting section is provided in said

reproducing system to detect that said offset voltage varies in a specific state, and when said offset signal variation detecting section does not detect that said offset signal is in said specific state, one of an output of said data and an operation of said program is stopped.

16. (Original) An illegal program operation stopping method as set forth in claim 15, wherein offset signal arrangement information recorded in an area of said optical disk is reproduced, and only when said offset signal variation detecting section detects that an offset signal is recorded in a specific area of said optical disk in a specific state indicated in said offset signal arrangement information, one of an output of data on said optical disk and an operation of said program is continued, and when not detecting it, one of the output of said data on said optical disk and the operation of said program is stopped.

17. (Original) An illegal program operation stopping method as claimed in claim 16, wherein said offset signal arrangement information recorded in an optical recording section is reproduced by said optical head.

18. (Original) An illegal program operation stopping method as claimed in claim 16, wherein said offset signal arrangement information recorded in a magnetic recording section is reproduced by a magnetic head.

19. (Original) A reproducing system comprising:
means for reproducing a disk physical feature from an optical disk in which disk physical feature information indicative of an optically detectable feature extracted from said optical disk is enciphered with one direction function and recorded in a cipher recording section;

means for converting the reproduced signal into a plain text through a cipher decoder;

measuring means for obtaining said disk physical feature information and further for measuring a disk physical feature of said optical disk;

check means for obtaining the measure disk physical feature information from said measuring means to check the measured disk physical feature information with said physical feature information; and

means for carrying out one of reproduction of said optical disk and operation of a program recorded in said optical disk only when the check result of said check means satisfies a constant condition.

20. (Original) A reproducing system as set forth in claim 19, wherein one of a RSA function, elliptic curve function and disclosed key cipher function is used as said one direction function.

21. (Original) A reproducing system as set forth in claim 19, further comprising: address detecting means for, when said measuring means reproduces the information from said optical disc, detecting an address to use, as said optically detectable feature information, an arrangement coordinate including an arrangement angle in a specific address of data on said optical disk; and rotational angle detecting means for detecting at least said arrangement angle of said specific address on said optical disk.

Claims 22-29 (Cancelled)

30. (New) An optical disk of the type having: a recording layer in which pits are arranged at predetermined positions in the track direction in accordance with a modulation signal thereby data are recorded, an edge of each of selected ones of said pits being shifted from each of said predetermined positions in the track direction in accordance with arrangement information.

31. (New) The optical disk as set forth in claim 30 wherein a signal obtained by encrypting said arrangement information is also recorded.

32. (New) The optical disk as set forth in claim 30 wherein said recording layer is divided into first and second areas such that said edge of each of selected one of said pits is shifted in accordance with said arrangement information in said first area and said edge of each of said pits is not shifted for each of said predetermined positions in said second area.

33. (Currently Amended) A reproducing system for an optical disk of the type having a recording layer in which pits are arranged at predetermined positions in the track direction in accordance with a modulation signal thereby data are recorded, and specific pits among said pits are shifted from said predetermined positions in the track direction comprising:

a check section for checking whether or not an edge of each of selected ones of said pits corresponding to a reproduced signal and an edge of each of selected ones of said pits corresponding to arrangement information determining track direction arrangement state of each of said pits have a specific relationship in the track direction arrangement by processing said reproduced signal using said arrangement information; and

a reproduction/program stopping section responsive to said check section for carrying out data reproduction and/or operations according to a reproduced program when a result of

checking by said check section indicates said specific relationship, and for stopping data reproduction and/or operations according to said reproduced program when said result of checking by said check station does not indicate said specific relationship.

34. (New) The reproducing system as set forth in claim 33, wherein said check section is arranged to determine whether or not said optical disk is either legally manufactured or legally copied or not so that a reproduced signal is outputted only when it is determined that said optical disk is legally manufactured or legally copied.

35. (New) The reproducing system as set forth in claim 33, wherein said check section is arranged to check said pits of a specific address.

36. (New) The reproducing system as set forth in claim 33, further comprising a cipher decoder for decrypting said arrangement information which is encrypted, thereby said check section is arranged to perform checking with respect to reproduced signal using said arrangement information decrypted by said cipher decoder.

37. (New) The reproducing system as set forth in claim 33, wherein said information including said arrangement information is picked up by an optical head from said optical disk.